



Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
Confederaziun svizra

Swiss Confederation

Federal Department of the Environment,  
Transport, Energy and Communications DETEC

**Federal Office for the Environment FOEN**  
Economics section

# Policy interest in relating footprint indicators to planetary boundaries



**59th LCA Discussion Forum**, June 12, 2015, ETH Zürich, Alumni Pavillon  
Swiss FOEN, Andreas Hauser, Economist



# Why planetary boundaries?



# A Safe Space for his children!

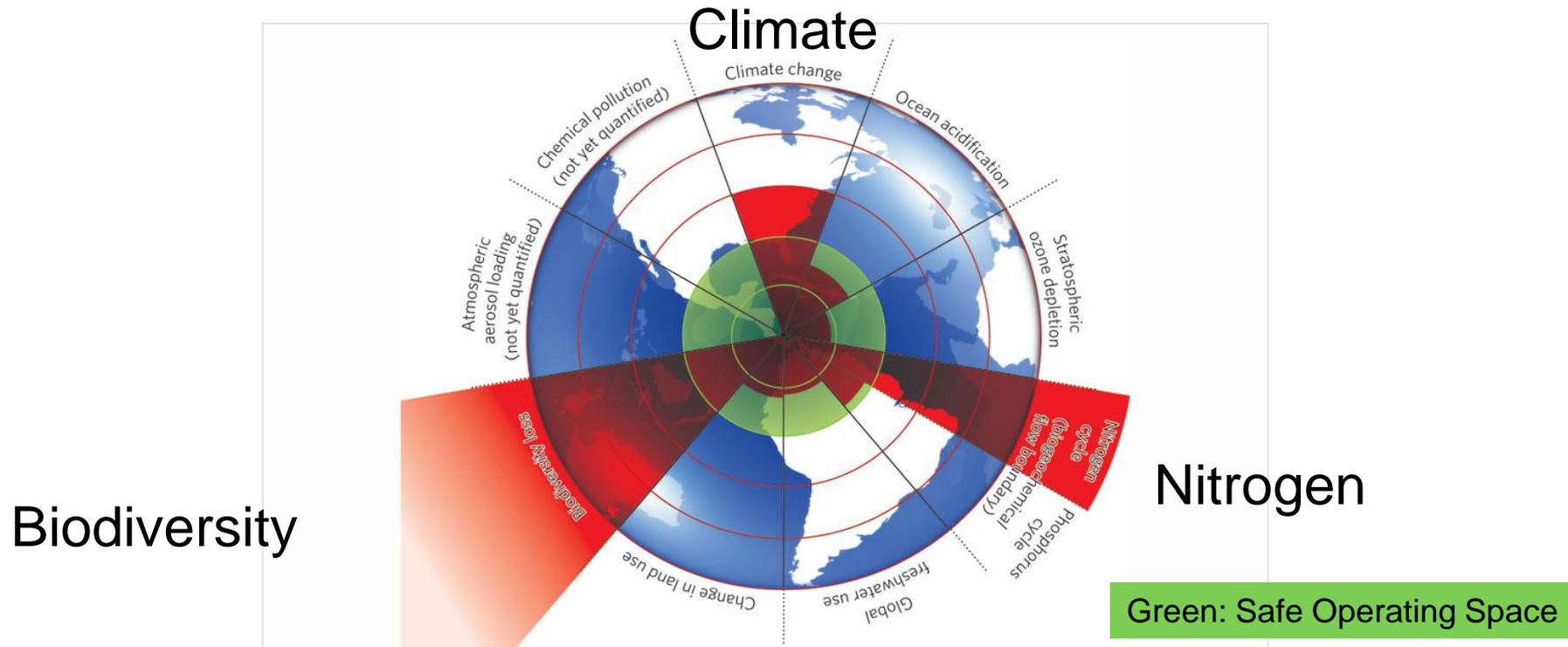


In order to live in a Safe Operating Space  
we have to respect its boundaries

© Andreas Hauser and Marlon Hauser



# Planet Earth under stress



Growth of emerging economies will increase this stress.



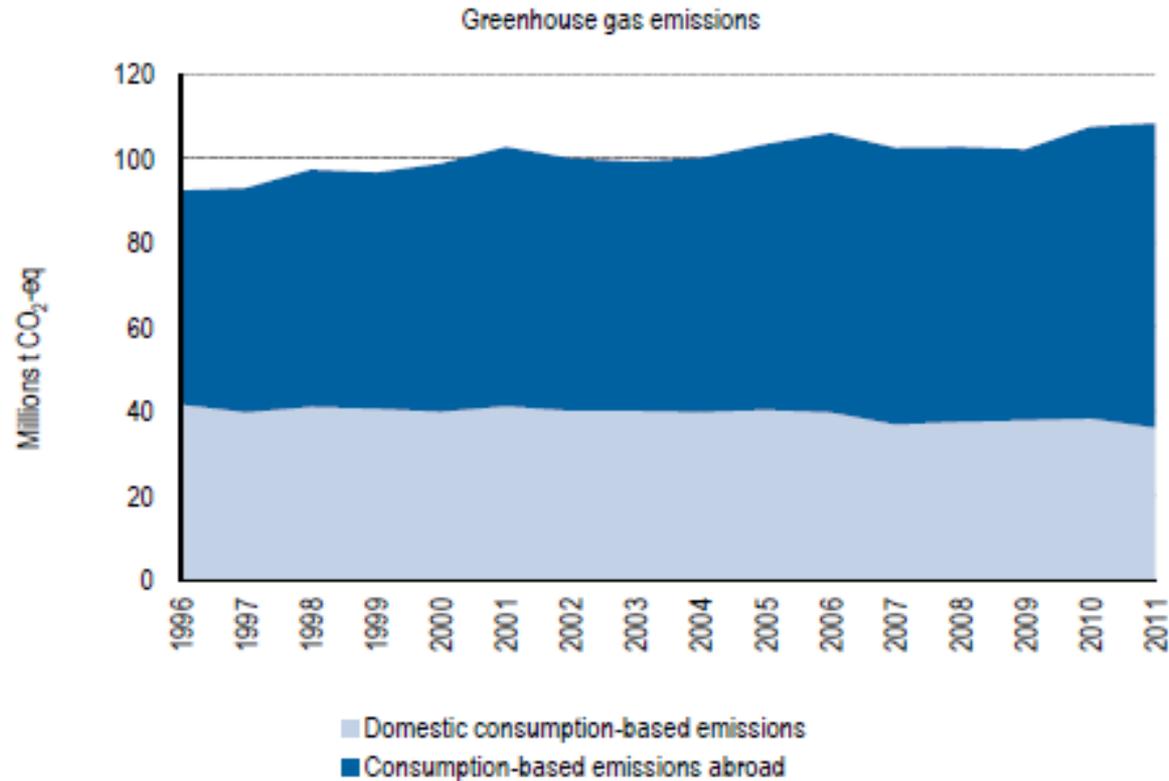
# Why adopt a Footprint perspective?



Globalised consumption → global responsibility



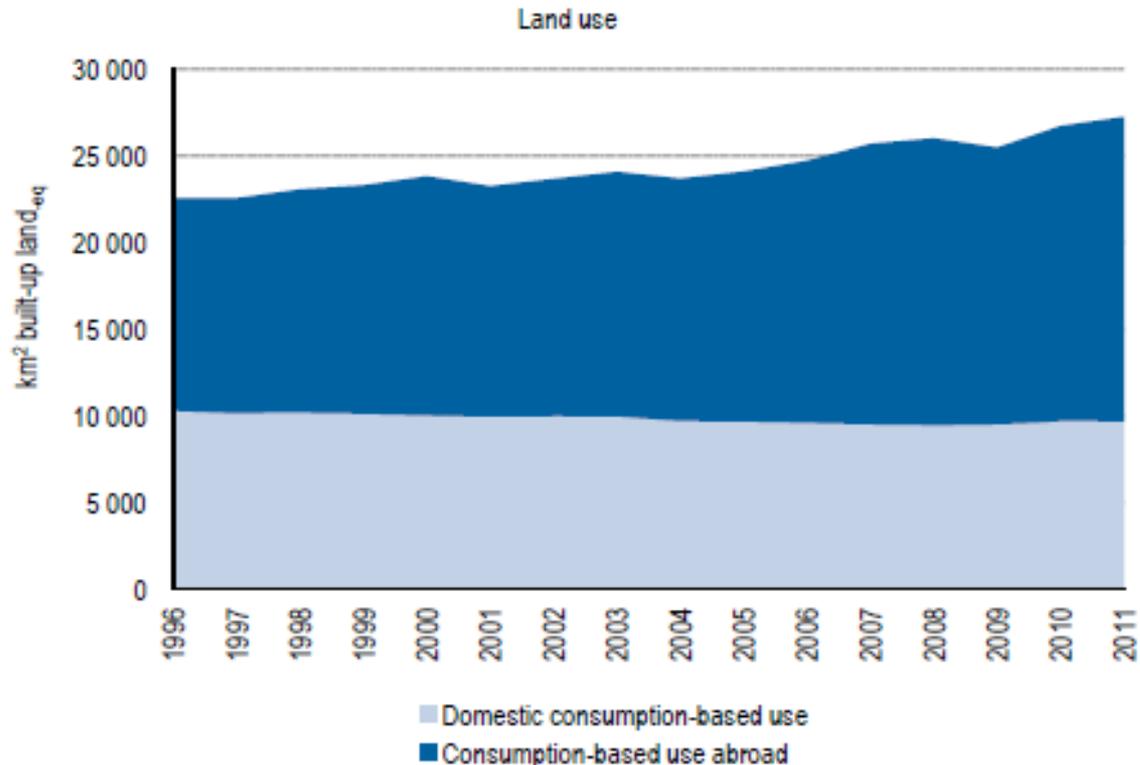
# Switzerland's Carbon Footprint



Emissions induced abroad on the rise.



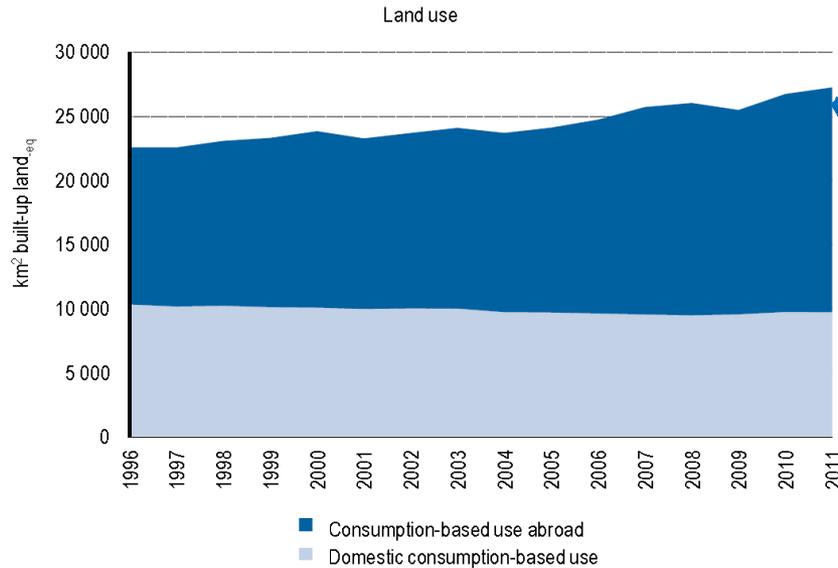
# Biodiversity impacts of land use («biodiversity footprint»)



Damage potential induced abroad on the rise. Similar tendency for other footprints (e.g. nitrogen / eutrophication)



# The challenging quest for footprint limit values!



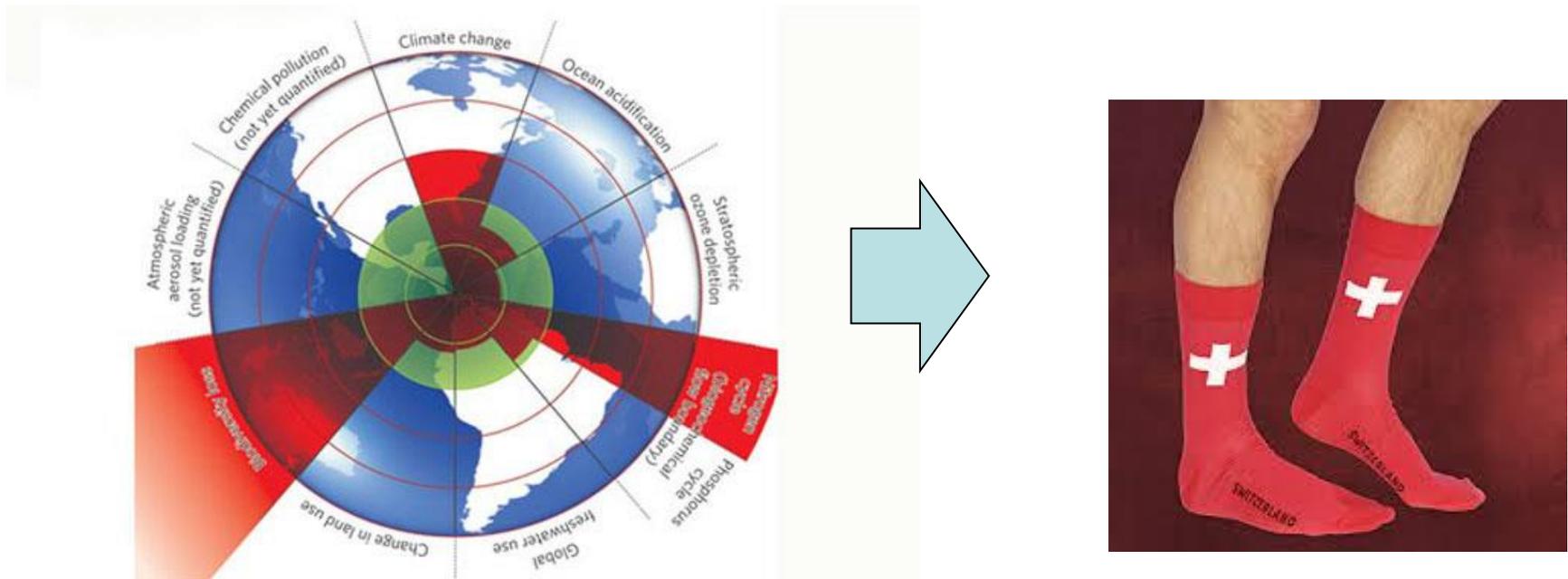
*What is the maximum sustainable level?*

Source: Calculations treeze and Rütter Soceco AG

Publication of the study is planned for the end of this year.



# Translating the Planetary Boundaries to a National Footprint Perspective

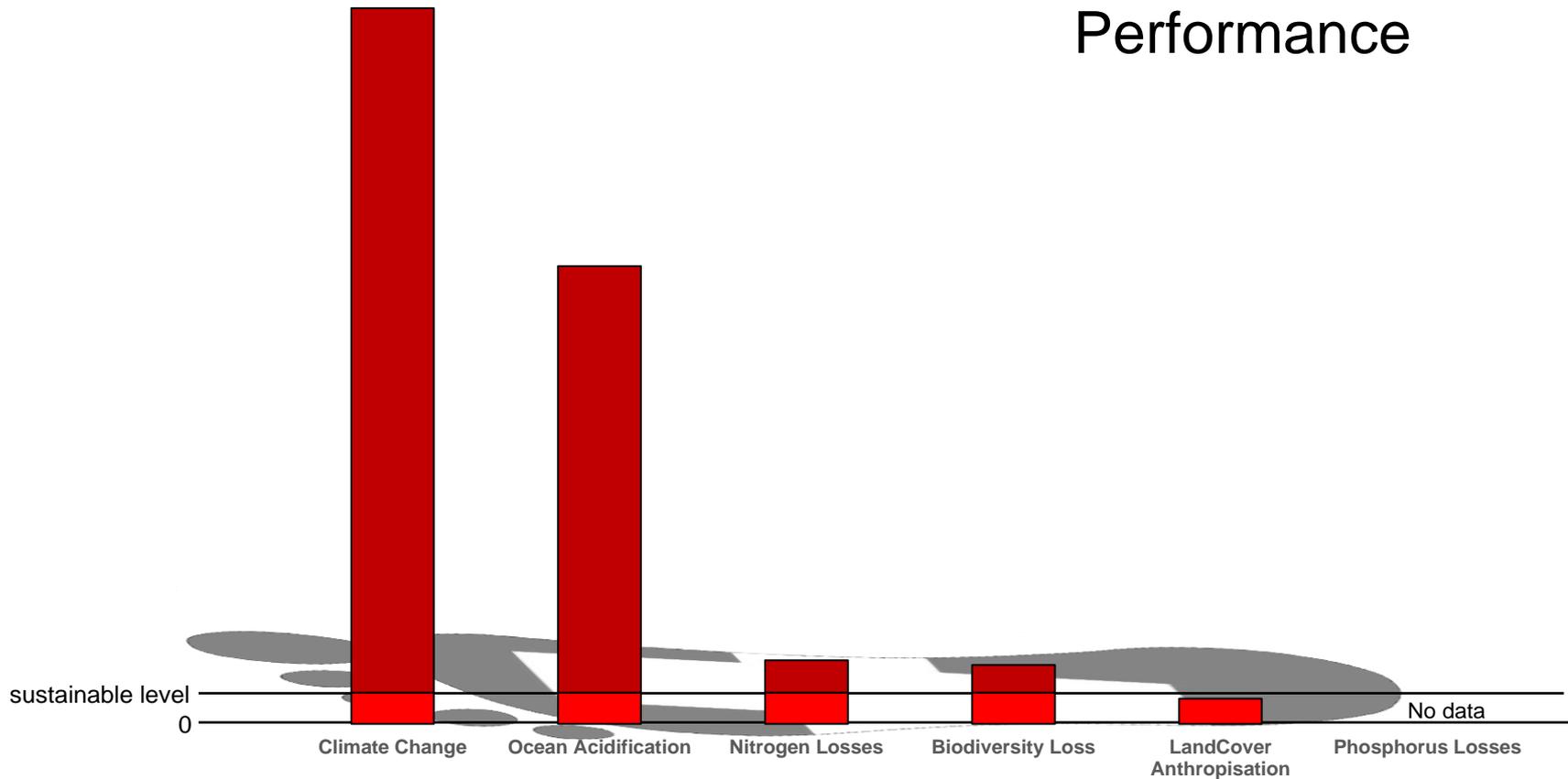


The study was conducted by UNEP-GRID (2015) and is inspired by Nykvist et al. (2013).



# Swiss footprints compatible with planetary boundaries?

Swiss  
Performance





# The Context of Green Economy Policy





# Popular initiative for a Green Economy

- Popular initiative “Green Economy” for a constitutional amendment submitted in 2012
- Initiative’s claim: reduction of the Swiss ecological **footprint to 1 earth** (when extrapolated to world population) **by 2050**
- Switzerland’s current footprint amounts to ~ 2.8 earths

"Popular initiative" is a direct-democratic instrument in Switzerland: Anyone can propose a constitutional amendment (needs 100'000 valid signatures), on which the Swiss citizens eventually has to vote on.



# Revision of the environment protection act (Government proposition)

The Swiss government prepared a counter-proposal: the revision of the environment protection act.

- A new Article (10h) states the duty of the Confederation to aim at reducing environmental impacts **taking into account impacts caused abroad**.
- It also schedules a mechanism for **setting targets** and **reporting on achievement**.
- A set of concrete measures is proposed in the domains of consumption and production as well as circular economy

The proposal is currently being debated in parliament.



# Action plan for a Green Economy

- On 8 March 2013, the Swiss government adopted the Green Economy action plan in its own competence.
- 27 measures in the four priority areas of action:
  - (1) Consumption and production,
  - (2) Wastes and raw materials,
  - (3) Cross-cutting instruments and
  - (4) Targets, monitoring, information, reporting
- By the end of 2015 a progress report with proposals for the next 4 years should be submitted to the government



## **Sustainable consumption and production patterns**

12.2 By 2030 achieve sustainable management and efficient use of natural resources

12.3 By 2030, halve per capita global food waste at the retail and consumer levels (...)

12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse

Quelle: UN Open Working Group proposal <https://sustainabledevelopment.un.org/focussdgs.html>



## Economic growth

- 8.4 Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation,

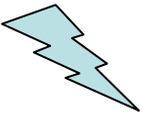
in accordance with the 10-year framework of programmes for sustainable consumption and production, with developed countries taking the lead



## The need for debate

### Ethical questions:

- What responsibility of countries to reduce their carbon footprint, land use / biodiversity footprint etc.?
- What is a „fair share“ of resource consumption - in a global context?

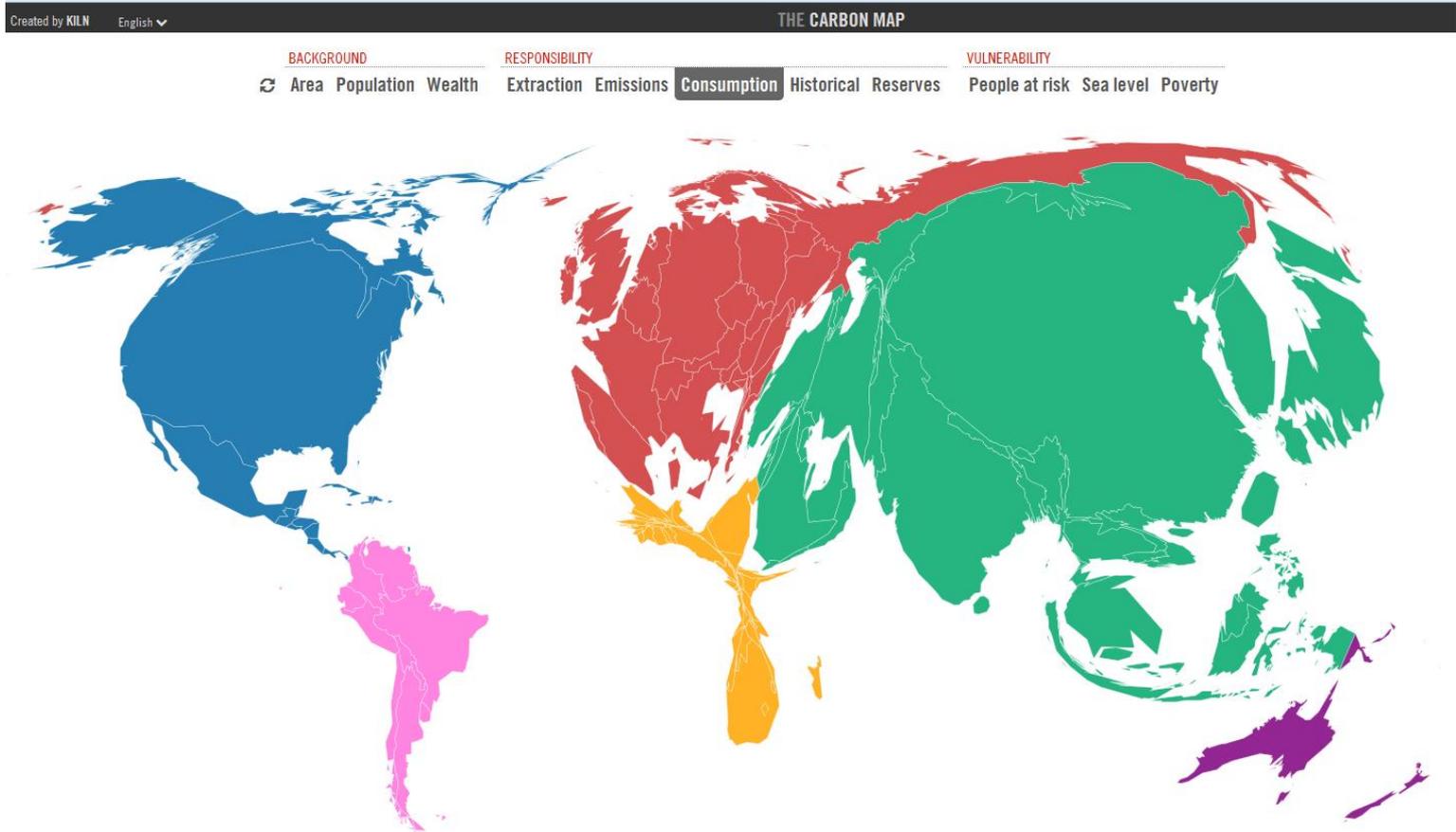


### Practical questions

- What (voluntary) measures are feasible?
- Which have the highest potential?



# Annex Whose responsibility?





# Welche konkreten Ziele?

## Fortschritte für Planet Erde

- **Lebensmittelverluste:** “By 2020, there is a 50% decrease in edible food waste in households, retailers and catering compared to 2010?  
(BioIntelligence 2013)
- **Palmöl, Soja, Kaffee...** Erhöhung Markt-Anteil zertifizierte Güter (z.B. RSPO)?
- **Reduktion Kraftfutter-Bedarf:** Erhöhung Markt-Anteil Wiesenmilch?
- **% Phosphor-Recycling / Reduktion P-Dünger-Importe?**
  
- **Graue Energie** bei Neubauten?
- **Textilabfall:** Reduce generation of waste from clothing and home textiles from households by x% or x tonnes by year y compared to base year y? (Watson et al. 2013)
- **Chemie:** Substitution problematischer Kühlmittel in Kühlschränken und Auto-Klimaanlagen?
  
- **Material-Fussabdruck durch biotische Ressourcen (TMC biotic)** auf 2 Tonnen pro Person reduzieren? (Bringezu 2015)